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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,942	12/11/2003	Rita L. Faunce	211552-00050	7274

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EXAMINER	
LUK, LAWRENCE W	
ART UNIT	**PAPER NUMBER**
2187	

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/732,942	FAUNCE ET AL.	
	Examiner	Art Unit	
	Lawrence W. Luk	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Morioka et al. (5,831,412).

Claim 1

As to claim 1, Morioka et al. disclose in figure 8, column 4, lines 45-56, column 13, lines 29-49, a battery charge indicator for sensing and indicating a near full state of charge of a lithium ion battery **(65)**, the battery charge indicator comprising: a sensing circuit **(67, 69, 71, 73)** for sensing when the charging current to said lithium ion battery **(65)** is equal to a first predetermined value less than the value of said charging current when said lithium ion battery **(65)** is in a constant current mode **(see figure 8, column 4, lines 45-56 and column 13, lines 29-36)** of operation and less than a fully charged battery state of said lithium ion battery **(see column 15, lines 11-13, the ratio detection taught by Morioka et al. is the sensing of the less than fully charged state since it can detect when the ratio drops)** and generating a first charge indication signal as when said charging currents is less than or equal to said first predetermined value representing a near full state of charge independent of said lithium ion battery voltage **(see column 15, lines 13-18)**; and an indicator **(75)** responsive to

said first charge indication signal for providing an indication when said lithium ion battery is at a near full state of charge **(see column 13, lines 47-49 and column 14, lines 16-19).**

Claim 2

As to claim 2, Morioka et al. disclose in figure 8, wherein said indicator **(75)** includes a first visual indication (see column 13, lines 47-49).

Claim 4

As to claim 4, Morioka et al. disclose in figure 9, said sensing circuit **(79, 81, 83, 85)** is configured to sensing other charging states of said battery **(77)**, other than said near full state of charge **(see column 14, lines 31-45)**.

Claim 5

As to claim 5, Morioka et al. discloses in figure 8, said sensing circuit **(67, 69, 71, 73)** is configured to sense when the battery charging current is less than said first predetermined value and generating a second charge indication signal representing that said charging current is at a charge state other than said near fully charged state **(see column 14, lines 7-20)**.

Claim 7

As to claim 7, Morioka et al. discloses in figure 9, said sensing circuit **(79, 81, 83, 85)** is configured to generate one or more charge indicating signals **(see column 15, lines 7-16)** selected from the group indicating that the state of charge of said battery is at a state of charge near full charge; at full charge or between said near charge state and said fully charged state **(see column 15, lines 17-19).**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morioka et al. (5,831,412) in view of Schousek et al. (6,222,370).

Claim 3

As to claim 3, Morioka et al. disclose the elements as claimed except Morioka et al. fails to teach the limitation of **wherein said first visual indication is a first light emitting diode.**

Schousek et al. discloses in figure 3, column 6, lines 45-51, said first visual indication is a first light emitting diode **(D6, Red).**

Morioka et al. and Schousek et al. are analogous art because they are from the area of battery charging electronic device including when said battery is at a near full state of charge.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include a first visual indication is a first light emitting diode as taught by Schousek et al.

The suggestion/motivation for doing so would have been to indicate the charge level of the energy source to a user, since such an indication would provide a quick and easily readable indication of the state of charge in the battery.

Therefore, it would have been obvious to combine Schousek et al. with Morioka et al. for the benefit of providing a visual indication of the state-of-charge of a battery to a user as indicated in column 6, lines 45-51 of Schousek et al.

Claims 6 and 8

As to claims 6 and 8, Morioka et al. in view of Schousek et al. are applied supra, and Schousek et al. further discloses in figure 1, wherein said second visual indication **(D3, Yellow)** is a second LED (see column 6, lines 45-51).

Claim 9

As to claim 9, Morioka et al. in view of Schousek et al. are applied supra, and Schousek et al. further discloses in figure 1,sensing circuit is configured to define first, second and third charging states and wherein said first LED is a red LED and said second LED is a green LED and in said first state, said red Led is illuminated and in said second state both said red and green LEDs are illuminated and in said third state, only said green LED is illuminated (see column 6, lines 44-59 of Schousek et al.).

5. RELEVANT ART CITED BY THE EXAMINER

The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure.

See **MPEP 707.05 (c)**.

The following references teach **a monitoring the charge current of the lithium ion battery is brought into a full charge state and the charge current becomes lower than, or equal to a predetermined value.**

U.S. PATENT NUMBER	FIGURES
2003/0137283	1

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571) 272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding are (703) 746-7239, (571) 272-2100 for regular communication and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to receptionist whose telephone number is (571) 272-2100.

LWL
January 8, 2006

Lawrence Luk
examiner
1/8/06